I. INTRODUCTION

During the past four years, this Commission has taken a number of steps to remove significant barriers to the growth of competition in the interstate access market. Given the historic dominance and ubiquity of the incumbent local exchange carriers (LECs),[1] and their control of bottleneck facilities to which new entrants need access in order to compete, we found that it would be in the public interest to impose expanded interconnection obligations on LECs. In a series of orders,[2] we required LECs to offer expanded interconnection -- that is, to allow competitors to collocate network equipment dedicated to their use at the LECs' central offices. These orders have enabled new telecommunications providers to rely in part on the telecommunications facilities of LECs to offer interstate access services on a competitive basis in markets where LECs have traditionally been the only providers. We believe that expanded interconnection at reasonable rates, terms, and conditions will bring numerous public interest benefits, including expanded service choices for telecommunications users, heightened incentives for efficiency, technological innovations, rapid deployment of new technology, and pressure on LECs to offer certain interstate access services at prices closer to economic cost.

It is clear that the success of efficient competitive entry through interconnection depends on the interconnectors' ability to obtain access to the LECs' transmission facilities at rates that reflect costs and under terms, and conditions that are just and reasonable. Pursuant to Sections 201 through 205 of the Communications Act of 1934, as amended (Act), we are using the tariff

---

[1] For purposes of this order, we use the term "LECs" to refer to incumbent Tier 1 LECs. Tier 1 local exchange carriers are companies having annual revenues from regulated telecommunications operations of $100 million or more. Commission Requirements for Cost Support Material To Be Filed with 1990 Annual Access Tariffs, Order, 5 FCC Rcd 1364 (Com. Car. Bur. 1990). The *Special Access Expanded Interconnection Order* excluded participants in the National Exchange Carrier Association (NECA) pools from this filing requirement. Expanded Interconnection with Local Telephone Company Facilities, CC Docket No. 91-141, Report and Order and Notice of Proposed Rulemaking, 7 FCC Rcd 7369, 7398 (1992) ("*Special Access Expanded Interconnection Order*"), *first recon.*, 8 FCC Rcd 127 (1992) ("*First Reconsideration Order*"), *second recon.*, 8 FCC Rcd 7341 (1993) ("*Second Reconsideration Order*"), *vacated in part and remanded sub nom. Bell Atlantic Telephone Companies v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994) ("*Bell Atlantic v. FCC*" or "*Bell Atlantic*") (vacating in part this Commission's expanded interconnection orders mandating expanded interconnection through physical collocation).

[2] *See* paras. 6-9 *infra*.

review process to ensure that LECs provide interstate expanded interconnection service at rates, terms and conditions that are just, reasonable, and nondiscriminatory. We are ordering modifications to numerous tariff provisions and rates that we conclude are unjust, unreasonable, or unreasonably discriminatory, and thus impede competitive provision of interstate access.

This physical collocation tariff investigation began when the Common Carrier Bureau (Bureau) partially suspended LECs' physical collocation tariffs pursuant to Section 204(a) of the Act, initiated an investigation into the lawfulness of these tariffs, imposed an accounting order, rejected as patently unlawful certain terms and conditions contained in the tariffs, and ordered other tariff revisions in the *Physical Collocation Tariff Suspension Order*.[3] The following LECs are subject to this investigation: Ameritech Operating Companies (Ameritech); Bell Atlantic Telephone Companies (Bell Atlantic); BellSouth Telecommunications, Inc. (BellSouth); Cincinnati Bell Telephone Companies (CBT); GTE System Telephone Companies (GSTC); GTE Telephone Operating Companies (GTOC) (GTOC and GSTC are also referred to collectively in this Order as "GTE");[4] Lincoln Telephone and Telegraph Company (Lincoln); Nevada Bell (Nevada);[5] New York Telephone Company (NYT) and New England Telephone and Telegraph Company (NET) (collectively, NYNEX); Pacific Bell (Pacific); Rochester Telephone Corporation (Rochester); Southern New England Telephone Company (SNET); Southwestern Bell Telephone Company (SWB); Central Telephone Companies (Central); United Telephone Companies (United);[6] and U S West Communications, Inc. (US West).[7] In its *Special Access*

---

[3] Ameritech Operating Companies, etc., et al., CC Docket No. 93-162, Order, 8 FCC Rcd 4589 (Com. Car. Bur. 1993) ("*Physical Collocation Tariff Suspension Order*").

[4] We note that, during the period under investigation, GSTC never had a physical collocation customer at any of its central offices and no longer offers physical collocation service. *See* Letter from F. Gordon Maxson, Director -Regulatory Affairs, GTE, to William F. Caton, Secretary, FCC (dated November 27, 1995). We do not make a determination in this Order as to the reasonableness of this company's rates, terms, and conditions because it is not required to file any tariff revisions or make any refunds.

[5] Although Nevada and Pacific both are owned by Pacific Telesis Group, the two operating companies have separate and very different tariffs, and are treated separately in this Order.

[6] During the period under investigation, United never had a physical collocation customer at any of its central offices and no longer offers physical collocation service. *See* Letter from Warren D. Hannah, Director - Federal Relations, Sprint to William F. Caton, Secretary, FCC (dated

(Footnote Continued on Next Page.)

Physical Collocation Designation Order (*Designation Order*), the Bureau designated for investigation: (1) whether the rate levels established in the LECs' physical collocation tariffs are excessive; (2) whether the rate structures established in the LECs' physical collocation tariffs are reasonable; and (3) whether the terms and conditions in the physical collocation tariffs are reasonable.[8] Subsequently, the Bureau released the *Supplemental Designation Order and Order to Show Cause,* which directed certain LECs to file supplemental direct cases regarding their use of time and materials charges for central office construction for physical collocation.[9]

In order to promote the development of efficient competition in the interstate access markets, we must ensure that LECs offer expanded interconnection at rates, terms, and

---

(Footnote Continued from Previous Page.)

December 7, 1995). We do not make a determination in this Order as to the reasonableness of this company's rates, terms, and conditions because it is not required to file any tariff revisions or make any refunds. Although both United and Central are owned by the Sprint Corporation, the two operating companies have separate and different tariffs, and are treated separately in this Order. References in this Order to "Sprint" refer to the long-distance carrier affiliate, which participated in this proceeding.

7 Lincoln, Nevada, NYNEX, Pacific, Rochester, and SNET are the six LECs that have physical collocation tariffs in effect, as part of this investigation. Ameritech, Bell Atlantic, BellSouth, CBT, GSTC, GTOC, SWB, Central, United, and US West are the LECs that no longer have physical collocation tariffs in effect as part of this investigation. In order to ensure consistency in style, throughout this Order, we use the present tense to discuss the direct costs, overhead loadings, and terms and conditions of all LECs.

8 Local Exchange Carriers' Rates, Terms and Conditions for Expanded Interconnection for Special Access, CC Docket No. 93-162, 8 FCC Rcd 6909 (Com. Car. Bur. 1993) ("*Designation Order*").

9 Local Exchange Carriers' Rates, Terms and Conditions for Expanded Interconnection for Special Access, CC Docket No. 93-3162, Supplemental Designation Order and Order to Show Cause, 9 FCC Rcd 2742 (Com Car. Bur. 1994 ("*Supplemental Designation Order*"). The Bureau also ordered United to show cause why it had not deleted references to individual case basis (ICB) pricing in developing rates for cage construction and site preparation for physical collocation as required in the *Physical Collocation Tariff Suspension Order*.

conditions that are just and reasonable. Accordingly, we have carefully reviewed the LECs' physical collocation tariffs, the direct cases and cost support that these LECs filed in response to the *Designation Order*, the interconnectors' and other parties' oppositions to these LECs' direct cases, and the rebuttals.[10] Following a thorough review of this record, we conclude in this Order that the LECs subject to this investigation have failed to meet their burden of proving the reasonableness of many of their rates, terms, and conditions. We therefore order certain direct cost disallowances for their physical collocation services, prescribe maximum permissible overhead loading factors, and order tariff revisions to correct unreasonable rate structures. We also order refunds for overcharges associated with physical collocation service offered by LECs after December 14, 1994. Finally, we reject certain terms and conditions that we believe to be unjust, unreasonable, and unreasonably discriminatory, and that effectively serve to impede efficient competition. The rate adjustments and tariff revisions that we are requiring by this Order will create, in our view, new opportunities for competitors to provide interstate access services, using, in part, essential telecommunications facilities over which the LECs retain bottleneck control.

In this Order, we also deny the petition for reconsideration of the *Interim Overhead Order*[11] filed by BellSouth, the petition for clarification of the *Supplemental Designation Order*[12] filed by Bell Atlantic, and applications for review of the *Physical Collocation Tariff Suspension Order*[13] filed by NYNEX, SWB, and US West.

---

[10] A complete summary of direct cases, oppositions, and rebuttals are included in Appendix E.

[11] Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection for Special Access, CC Docket No. 93-162, First Report and Order, 8 FCC Rcd 8344 (1993) ("*Interim Overhead Order*").

[12] *Supplemental Designation Order*, 9 FCC Rcd 2742.

[13] *See Physical Collocation Tariff Suspension Order*, 8 FCC Rcd 4589.

EXHIBIT D

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

In the Matter of the Joint Application of Pacific Telesis Group ("Telesis") and SBC Communications Inc., ("SBC") for SBC to Control Pacific Bell (U 1001 C), Which Will Occur Indirectly as a Result of Telesis' Merger With a Wholly Owned Subsidiary of SBC Communications (NV) Inc.	A. 96-04-038 (Filed April 26, 1996) Opinion of the Attorney General on Competitive Effects of Proposed Merger Between Pacific Telesis Group and SBC Communications, Inc.

DANIEL E. LUNGREN,
Attorney General of the
State of California
DAVID STIRLING, Chief
Deputy Attorney General
RODERICK E. WALSTON, Chief
Assistant Attorney General
THOMAS GREENE
Assistant Attorney General
RICHARD N. LIGHT
Supervising Attorney General
J. LINDSAY BOWER
Deputy Attorney General

50 Fremont Street, Suite 300
San Francisco, California 94105-2239
(415) 356-6377

Attorneys for the State of California

ATTORNEY GENERAL'S OPINION

December 31, 1996

Requested by: PUBLIC UTILITIES COMMISSION

Opinion by: DANIEL E. LUNGREN, Attorney General
David Stirling, Chief Deputy Attorney General
Roderick E. Walston, Chief Assistant Attorney General
Thomas Greene, Assistant Attorney General
Richard N. Light, Supervising Deputy Attorney General
J. Lindsay Bower, Deputy Attorney General

THE PUBLIC UTILITIES COMMISSION has requested an advisory opinion, pursuant to Public Utilities Code section 854, subdivision (b)(3), on the following questions:

(1) Will the proposed acquisition of Pacific Telesis Group by SBC Communications, Inc. adversely affect competition?

(2) What mitigation measures could be adopted to avoid any adverse effects on competition that do result?

CONCLUSIONS

(1) The proposed acquisition should not adversely affect competition in the markets for telephone or wireless services.

(2) Mitigation measures are not required, but we recommend that the Commission maintain a stable system of price cap regulation for telephone services.

Accordingly, we have concluded that the acquisition will not adversely affect competition within the meaning of section 854(b)(3).

OUTLINE OF ANALYSIS

INTRODUCTION

The proposed acquisition of Pacific Telesis by SBC Communications would unify two of the Bell Operating Companies divested from AT&T in 1984. In this proceeding, Pacific Telesis and SBC Communications have applied to the California Public Utilities Commission for authorization to transfer from Telesis to SBC indirect control of Pacific Bell. Pursuant to Public Utilities Code 854, the Attorney General of California submits this opinion on the competitive effects of this merger upon California telecommunications markets.

Several parties have intervened and protested the application. AT&T and MCI claim that the merger will reduce competition by eliminating SBC as a possible supplier in future markets for local and other services. The Office of Ratepayer Advocates does not specifically contend that the merger would be anticompetitive, but does propose certain conditions designed to address allegedly adverse effects of the merger upon state and local economies, service quality, company management, employee relations, and regulatory effectiveness.[1] Likewise, Utilities Consumer Action Network (UCAN) proposes the creation of a regulatory agency to mitigate the alleged "potential ability [of the merged entity] to engage in predation." Contending that "SBC has a long, well-documented history of aggression and misbehavior," the Association of Directory Publishers requests restrictions over the manner in which the surviving company provides or uses directory listing information.[2] The applicants have also settled with Teleport Communications Group, Inc., ICG Access Services, Inc., the City and County of San Francisco, CWA and with intervenors represented by Public Advocates and the Greenlining Institute. On November 5, 1996, the United States Department of Justice separately closed its investigation after concluding that the merger did not violate the antitrust laws.

We find that Pacific Telesis and SBC are neither actual nor potential competitors in any relevant California market for telecommunications services. Primarily for that reason, this office concludes that the merger in itself will have no adverse effects upon competition. We also conclude that the merged entity would not cross-subsidize its long distance affiliates in restraint of trade and we continue to support efforts by the BOCs to enter that market. Nonetheless, there may be unregulated services for which such strategies would be effective under cost-based regulation. We recommend that the Commission maintain its price cap system both to minimize incentives to engage in cross-subsidization strategies and to provide a stable environment for industry investment.

---

[1]ORA has proposed 47 conditions to approval of the merger. See Joint Brief of Applicants at Appendix A. The most stringent of these proposals include: "requir[ing] the merged company to maintain the same level of annual investment over the next 10 years," Selwyn Direct Test. at 177; "extending indefinitely the NRF sharing requirements to ensure that if unforeseen efficiencies result from the merger, ratepayers are compensated for these efficiencies," Selwyn Direct Test. at 183; providing California wireless services through a separate affiliate, Selwyn Direct Test. at 192; and expanding the period during which the merged companies would retain separate affiliates for manufacturing, in-region interLATA, and interLATA information services, Selwyn Direct Test. at 192.

[2]Pflaum Direct Test. at 30-35.

Consequently this document does not control the PUC's finding under section 854, subdivision (b)(3). However, the Attorney General's advice is entitled to the weight commonly accorded an Attorney General's opinion (see, e.g., Moore v. Panish (1982) 32 Cal.3d 535, 544 ("Attorney General opinions are generally accorded great weight"); Farron v. City and County of San Francisco, (1989) 216 Cal.App.3d 1071).

C. Evidentiary Basis of This Opinion

During the course of our review, we held numerous discussions with the parties and PUC staff and obtained substantial materials from them pertaining to the issues discussed. We also reviewed testimony filed in these proceedings, along with the transcripts of witnesses who testified on the competitive effects of this transaction. Additional information was obtained from other members of the industry and from staff of other governmental agencies. We have also relied upon Professor Frank Wolak and Professor Robert Michaels to obtain further background information and a better understanding of the industry.

II. THE MERGER

This proposed merger would create the largest supplier of local services in the United States and the sixth largest telecommunications firm in the world.[7] Both Telesis and SBC currently generate most of their revenues from local, access, and intraLATA services. In addition, SBC is a major supplier of cellular services. Pursuant to the Modified Final Judgment ("MFJ"), both firms were until this year also prohibited from offering interLATA services in competition with AT&T and other long distance carriers.

Through its Pacific Bell subsidiary, Telesis serves approximately 75 percent of California's 31 million residents. SBC provides local telephone services through its Southwestern Bell subsidiary in the states of Texas, Arkansas, Oklahoma, Kansas, and Missouri. The acquiring company, which has its corporate headquarters in San Antonio, Texas, has "no operations"[8] and does an insignificant amount of business in California. In addition, SBC offers wireless services under the Cellular One brand in 27 markets, including Chicago, Boston, Baltimore, and Washington, D.C.[9]

---

(3) Not adversely affect competition. In making this finding, the commission shall request an advisory opinion from the Attorney General regarding whether competition will be adversely affected and what mitigation measures could be adopted to avoid this result.

[7]NYNEX and Bell Atlantic recently agreed to merge. If approved, their merger would create the largest local telephone company in the United States.

[8]Application at 23. SBC does, however, have a passive three percent ownership interest in Bay Area Cellular. Application at 16 n.8.

[9]Application at 22.

BOCs in reducing operating costs[18] and is a major supplier of internet services.[19] Perhaps most important, the applicants claim that the merger will benefit consumers because it "is likely to result in substantial price reductions in the interexchange, wireless and international telephone markets which are not now as competitive as they might be."[20]

B. Telesis and SBC Telephone Services

Both of the applicants offer local, access and intraLATA toll services within their service regions.[21] In California, competition is increasingly intense for services whose allowed rates exceed their costs. These services include dedicated access, business switched access, and intraLATA toll. On the other hand, LECs are the only suppliers of most residential local and residential switched access services because those services are heavily subsidized.

Until recently, government regulation and sunk costs[22] presented virtually insuperable barriers to entry into all telecommunications markets. The Telecommunications Act of 1996 and PUC deregulatory efforts, however, opened all telecommunications markets to competition. Technological advances have also reduced sunk costs by permitting selective entry[23] and by offering cost and performance advantages over existing technologies.[24] The

---

[18]Telesis operating costs are among the lowest in the country. Dorman Rebuttal Test. at 12; Perl Direct Test. at 7; Response to Data Request No. PTG-047; D.95-12-052, at 12.

[19]Application at 9.

[20]Response to Data Request No. DRA-PTRG-028. AT&T and MCI implicitly contend that the merger may reduce long distance rates between Telesis and SBC service areas because the merged entity will base profit-maximizing prices upon the actual cost of providing switched access rather than the higher rate it charges long distance suppliers for such services. See Brenner Direct Test. at 33-35.

[21]Telesis reported its 1995 revenues as follows: local services, $3,815 million; network access, $2,447 million; toll services, $1,232 million; other services, $1,548 million. Pacific Telesis Proxy Statement, at F-19 (Mar. 15, 1996). SBC reported 1995 revenues, as follows: local services, $6,549 million; network access, $3067 million; long distance service, $840 million; other services, $1,260 million. SBC Communications Inc. 1995 Annual Report, at 32.

[22]A cost is "sunk" if it is paid upon entry but is not recoverable upon exit. See Larson, An Economic Guide to Competitive Standards in Telecommunications Regulation, 1 CommLaw Conspectus 31, 51 (1993).

[23]"[A] new entrant need not duplicate the . . . entire transmission and switch system[ ] to enter the market profitably. The entrant need only enter portions of the market where the expected revenues exceed the expected costs of providing new service." Spulber, Deregulating Telecommunications, 12 Yale J.Reg. 25, 47 (1995).

[24]Spulber, supra, at 47-49

EXHIBIT E

PACIFIC BELL NETWORK

Telecommuting Guide

Table of Contents

Move the work....

....instead of the worker!

Please note:

This Telecommuting Resources Guide is available for downloading in Adobe Acrobat (PDF) format by clicking here (275K).

Next

go to telecommuting

help me find a solution | how do other people use it? | good ideas and special offers | products and services catalog | about Pacific Bell

contact us

home page

search center

Recently the cost of video conferencing equipment has fallen significantly through the use of personal computers. You can buy an adapter that allows your PC to function as a video conference terminal. The adapter uses the screen of your PC and adds a video camera and plug-in card. A video conference requires compatible equipment at each end of the link.

With video conferencing, you get both a video and audio link to the meeting. Many high-technology companies with offices in different parts of the country already use video conferencing to avoid having their staff travel. Productivity improves and money is saved through elimination of time loss due to travel.

Data Transmission Services

Switched 56 Overview

Capability Description:

Switched 56 is a low-cost, digital, 56 Kbps dial-up alternative to leased lines or analog services. It is also a primary service used to supplement the areas where ISDN is not yet available. Pricing is similar to regular phone service (see tariff information below), a flat monthly charge plus usage at existing voice rates with time-of-day discounts. Primary application for Switched 56 are similar to those for ISDN, telecommuting, screen sharing, desktop video conferencing, large file transfer and Internet access. Contact Pacific Bell at **1-800-PAC-BELL.**

Current and planned deployment:

Currently, Switched 56 is available to 90% of Pacific Bell's business and residential customers.

Available in two or four wire technology (four wire technology enables installation to locations that are further in distance from the Central Office).

Tariff information:

SDS 56 = **$500** onetime installation + **$45** per month + usage (the installation charge will be waived if you agree to keep the service for 2 years).

All tariff prices quoted are subject to change. Please verify prices with your Pacific Bell representative before making a buying decision.

ISDN Overview

Capability Description:

ISDN maximizes the transmission capability of existing copper wires, allowing for the simultaneous transmission of voice and data over a single twisted pair connection. Its uses include telecommuting, screen sharing, desktop video conferencing, large file transfer and Internet access. Contact Pacific Bell at **1-800-PAC-BELL.**

Current And Planned Deployment:

Currently, Basic Rate ISDN is available to 80% of Pacific Bell's Silicon Valley business and residential customers.

Availability will increase to 90% by the end of 1994 with the ISDN *Anywhere* offering. This service will bring ISDN to customers even if their local switch is not equipped to serve ISDN.

Tariff Information:

Currently, Basic Rate ISDN is available in three tariffed offerings.

Centrex IS = **$150** onetime installation + **$200** Centrex establishment charge + **$32** per month + usage (there is a 2-line minimum. Also, there are no usage charges when calling inside your Centrex block).

SDS IS (Single Line ISDN) = **$150** onetime installation + **$28** per month + usage (the installation charge will be waived if you agree to keep the service for 2 years).

Home ISDN = **$125** onetime installation + **$24.50** per month + usage (Zone 1 usage is measured 8AM to 5PM weekdays and is unmeasured evenings and weekends. Again, the installation charge will be waived if you agree to keep the service for 2 years).

All tariff prices quoted are subject to change. Please verify prices with your Pacific Bell representative before making a buying decision.

Dedicated Line (ADN) Overview

Capability Description:

ADN (Advanced Digital Network) is a digital, private line, data transport service. Its features include variable speeds, customer-controlled network reconfiguration, advanced error correction and enhanced network security. Its uses include LAN-to-LAN interconnection, telecommuting, point-of-sale transactions and video-conferencing. Also, it has the advantage of being a flat-rate service. There are no usage or toll charges associated with ADN, only a recurring monthly charge plus a fixed mileage charge. This is especially important for telecommuters who live a considerable distance from their host or main office location. Contact Pacific Bell at **1-800-PAC-BELL**.

Current And Planned Deployment:

Currently, ADN is universally available to all Pacific Bell customers

Tariff Information:

Fixed speeds ranging from 2.4 Kbps – 56 Kbps = **$620** onetime installation + **$50** per month + **$6** per airline mile

Variable speeds ranging from 1.2 Kbps – 38.4 Kbps = **$620** onetime installation + **$67** per month + **$6** per airline mile

Variable speeds ranging from 1.2 Kbps – 64 Kbps = **$620** onetime installation + **$75** per month + **$12** per airline mile

All tariff prices quoted are subject to change. Please verify prices with your Pacific Bell representative before making a buying decision.

EXHIBIT F

FCC 96-325

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Implementation of the Local Competition Provisions in the Telecommunications Act of 1996	)	CC Docket No. 96-98
	)	
Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers	)	CC Docket No. 95-185

FIRST REPORT AND ORDER

Adopted: August 1, 1996 Released: August 8, 1996

By the Commission: Chairman Hundt and Commissioners Quello, Ness, and Chong issuing separate statements.

Table of Contents

the incumbent LEC for a competitor should be made reciprocal, because new business buildings or residential developments may have only facilities owned by a new entrant. Absent a reciprocity requirement, Bell Atlantic contends that incumbent LECs could be at a competitive disadvantage in competing for those customers. Bell Atlantic also argues that reciprocal interconnection will put a check on potentially unrealistic unbundling requests.[459]

3. Discussion

216. We conclude that minimum national standards for just, reasonable, and nondiscriminatory terms and conditions of interconnection will be in the public interest and will provide guidance to the parties and the states in the arbitration process and thereafter. We believe that national standards will tend to offset the imbalance in bargaining power between incumbent LECs and competitors and encourage fair agreements in the marketplace between parties by setting minimum requirements that new entrants are guaranteed in arbitrations. Negotiations between an incumbent and a new entrant differ from commercial negotiations in a competitive market because new entrants are dependent solely on the incumbent for interconnection.

217. Section 202(a) of the Act states that "[i]t shall be unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, practices, . . . facilities, or services for or in connection with like communication service . . . by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person."[460] By comparison, section 251(c)(2) creates a duty for incumbent LECs "to provide . . . any requesting telecommunications carrier, interconnection with a LEC's network on rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[461] The nondiscrimination requirement in section 251(c)(2) is not qualified by the "unjust or unreasonable" language of section 202(a). We therefore conclude that Congress did not intend that the term "nondiscriminatory" in the 1996 Act be synonymous with "unjust and unreasonable discrimination" used in the 1934 Act, but rather, intended a more stringent standard.

218. Given that the incumbent LEC will be providing interconnection to its competitors pursuant to the purpose of the 1996 Act, the LEC has the incentive to discriminate against its

---

installation, service, and maintenance intervals that apply to LEC customers and services); Rural Tel. Coalition comments at 32-33 (service intervals for small and rural LECs with respect to provision of interconnection should only be equal to those which the LEC achieves for itself).

[459] Bell Atlantic comments at 32.

[460] 47 U.S.C. § 202(a).

[461] 47 U.S.C. § 251(c)(2)(D).

competitors by providing them less favorable terms and conditions of interconnection than it provides itself. Permitting such circumstances is inconsistent with the procompetitive purpose of the Act. Therefore, we reject for purposes of section 251, our historical interpretation of "nondiscriminatory," which we interpreted to mean a comparison between what the incumbent LEC provided other parties in a regulated monopoly environment. We believe that the term "nondiscriminatory," as used throughout section 251, applies to the terms and conditions an incumbent LEC imposes on third parties as well as on itself. In any event, by providing interconnection to a competitor in a manner less efficient than an incumbent LEC provides itself, the incumbent LEC violates the duty to be "just" and "reasonable" under section 251(c)(2)(D). Also, incumbent LECs may not discriminate against parties based upon the identity of the carrier (*i.e.*, whether the carrier is a CMRS provider, a CAP, or a competitive LEC). As long as a carrier meets the statutory requirements, as discussed in this section, it has a right to obtain interconnection with the incumbent LEC pursuant to section 251(c)(2).

219. We identify below specific terms and conditions for interconnection in discussing physical or virtual collocation (*i.e.*, two methods of interconnection).[462] We conclude here, however, that where a carrier requesting interconnection pursuant to section 251(c)(2) does not carry a sufficient amount of traffic to justify separate one-way trunks, an incumbent LEC must accommodate two-way trunking upon request where technically feasible. Refusing to provide two-way trunking would raise costs for new entrants and create a barrier to entry. Thus, we conclude that if two-way trunking is technically feasible, it would not be just, reasonable, and nondiscriminatory for the incumbent LEC to refuse to provide it.

220. Finally, as discussed below,[463] we reject Bell Atlantic's suggestion that we impose reciprocal terms and conditions on incumbent LECs and requesting carriers pursuant to section 251(c)(2). Section 251(c)(2) does not impose on non-incumbent LECs the duty to provide interconnection. The obligations of LECs that are not incumbent LECs are generally governed by sections 251(a) and (b), not section 251(c). Also, the statute itself imposes different obligations on incumbent LECs and other LECs (*i.e.*, section 251(b) imposes obligations on all LECs while section 251(c) obligations are imposed only on incumbent LECs). We do note, however, that 251(c)(1) imposes upon a requesting telecommunications carrier a duty to negotiate the terms and conditions of interconnection agreements in good faith. We also conclude that MCI's POI proposal, permitting interconnecting carriers, both competitors and incumbent LECs, to designate points of interconnection on each other's networks, is at this time best addressed in negotiations and arbitrations between parties.[464] We believe that the record on

---

[462] *See infra*, Section VI.

[463] *See infra*, Section XI.A.

[464] Of course, requesting carriers have the right to select points of interconnection at which to exchange traffic with an incumbent LEC under section 251(c)(2).

312. We conclude that the obligation to provide "nondiscriminatory access to network elements on an unbundled basis"[674] refers to both the physical or logical connection to the element and the element itself. In considering how to implement this obligation in a manner that would achieve the 1996 Act's goal of promoting local exchange competition, we recognize that new entrants, including small entities, would be denied a meaningful opportunity to compete if the quality of the access to unbundled elements provided by incumbent LECs, as well as the quality of the elements themselves, were lower than what the incumbent LECs provide to themselves. Thus, we conclude it would be insufficient to define the obligation of incumbent LECs to provide "nondiscriminatory access" to mean that the quality of the access and unbundled elements incumbent LECs provide to all requesting carriers is the same. As discussed above with respect to interconnection,[675] an incumbent LEC could potentially act in a nondiscriminatory manner in providing access or elements to all requesting carriers, while providing preferential access or elements to itself. Accordingly, we conclude that the phrase "nondiscriminatory access" in section 251(c)(3) means at least two things: first, the quality of an unbundled network element that an incumbent LEC provides, as well as the access provided to that element, must be equal between all carriers requesting access to that element; second, where technically feasible, the access and unbundled network element provided by an incumbent LEC must be at least equal-in-quality to that which the incumbent LEC provides to itself.[676]

313. We believe that Congress set forth a "nondiscriminatory access" requirement in section 251(c)(3), rather then an absolute equal-in-quality requirement, such as that set forth in section 251(c)(2)(C), because, in rare circumstances, it may be technically infeasible for incumbent LECs to provide requesting carriers with unbundled elements, and access to such elements, that are equal-in-quality to what the incumbent LECs provide themselves. According to some commenters, this problem arises in connection with one variant of one of the unbundled network elements we identify in this order. These commenters argue that a carrier purchasing access to a 1AESS local switch may not be able to receive, for example, the full measure of customized routing features that such a switch may afford the incumbent.[677] In the rare circumstances where it is technically infeasible for an incumbent LEC to provision access or elements that are equal-in-quality, we believe disparate access would not be inconsistent with the nondiscrimination requirement. Accordingly, we require incumbent LECs to provide access and unbundled elements that are at least equal-in-quality to what the incumbent LECs provide

---

[674] 47 U.S.C. § 251(c)(3).

[675] *See supra*, Sections IV.G, IV.H.

[676] We note that providing access or elements of lesser quality than that enjoyed by the incumbent LEC would also constitute an "unjust" or "unreasonable" term or condition.

[677] *See infra*, Section V.J, discussing commenters' arguments regarding the possible technical limitations of such switches.

themselves, and allow for an exception to this requirement only where it is technically infeasible to meet.[678] We expect incumbent LECs to fulfill this requirement in nearly all instances where they provision unbundled elements because we believe the technical infeasibility problem will arise rarely. We further conclude, however, that the incumbent LEC must prove to a state commission that it is technically infeasible to provide access to unbundled elements, or the unbundled elements themselves, at the same level of quality that the incumbent LEC provides to itself.

314. Our conclusion that an incumbent LEC must provide unbundled elements, as well as access to them, that is "at least" equal in quality to that which the incumbent provides itself, does not excuse incumbent LECs from providing, when requested and where technically feasible, access or unbundled elements of higher quality.[679] As we discuss below,[680] we do not believe that this obligation is unduly burdensome to incumbent LECs because the 1996 Act requires a requesting carrier to pay the costs of unbundling, and thus incumbent LECs will be fully compensated for any efforts they make to increase the quality of access or elements within their own network.[681] Moreover, to the extent this obligation allows new entrants, including small entities, to offer services that are different from those offered by the incumbent, we believe it is consistent with Congress's goal to promote local exchange competition. We note that, to the extent an incumbent LEC provides an element with a superior level of quality to a particular carrier, the incumbent LEC must provide all other requesting carriers with the same opportunity to obtain that element with the equivalent higher level of quality. We further note that where a requesting carrier specifically requests access or unbundled elements that are lower in quality to what the incumbent LECs provide themselves, incumbent LECs may offer such inferior quality if it is technically feasible. Finally, we conclude that the incumbent LEC must prove to a state commission that it is technically infeasible to provide access to unbundled elements, or the unbundled elements themselves, at a level of quality that is superior to or lower than what the incumbent LEC provides to itself.

b. Just, Reasonable and Nondiscriminatory Terms and Conditions for the Provision of Unbundled Network Elements

---

[678] The exception described here does not excuse incumbent LECs from the obligation to modify elements within their networks to allow requesting carriers to obtain access to such elements where this is technically feasible. *See supra*, Section IV.D.

[679] An incumbent LEC, in accommodating a carrier's request for a particular unbundled element, may ultimately provision an element that is higher in quality than what the incumbent provides to itself. *See infra*, Section V.J.1.

[680] *See infra*, Section V.J. We require, for example, that incumbent LECs provide local loops conditioned to enable the provision of digital services (where technically feasible) even if the incumbent does not itself provide such digital services.

[681] *See infra*, Section VII.

VI. METHODS OF OBTAINING INTERCONNECTION AND ACCESS TO UNBUNDLED ELEMENTS

542. In this section, we address the means of achieving interconnection and access to unbundled network elements that incumbent LECs are required to make available to requesting carriers.

A. Overview

1. Background

543. Section 251(c)(2) requires incumbent LECs to provide interconnection with the LEC's network "for the facilities and equipment of any requesting telecommunications carrier."[1321] Section 251(c)(6) imposes upon incumbent LECs "the duty to provide . . . for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the [LEC], except that the carrier may provide for virtual collocation if the [LEC] demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations."[1322] In the NPRM, we noted that section 251(c)(6) does not expressly limit the Commission's authority under section 251(c)(2) to establish rules requiring incumbent LECs to make available a variety of methods of interconnection, except in situations where the incumbent can demonstrate to the state commission that physical collocation is not practical for technical reasons or space limitations. We tentatively concluded that the Commission has the authority to require any reasonable method of interconnection, including physical collocation, virtual collocation, and meet point interconnection arrangements.[1323]

[1321] 47 U.S.C. § 251(c)(2).

[1322] 47 U.S.C. § 251(c)(6).

[1323] NPRM at para. 64. Under the Commission's *Expanded Interconnection* rules, LECs are not required to offer a collocating carrier a choice between physical and virtual collocation. *Special Access Order*, 7 FCC Rcd at 7407; *Switched Transport Order*, 8 FCC Rcd at 7404; *see also Physical Collocation Designation Order*, 8 FCC Rcd 4589 (under our *Expanded Interconnection* rules, LECs must provide virtual collocation where: virtual collocation is available on an intrastate basis; a LEC has negotiated an interstate virtual collocation arrangement; LECs are exempted from providing physical collocation because of space constraints; or a state commission has granted a waiver). Also, *see* Section VI.B.1.b. regarding the definitions of physical and virtual collocation.

3. Discussion

549. We conclude that, under sections 251(c)(2) and 251(c)(3), any requesting carrier may choose any method of technically feasible interconnection or access to unbundled elements at a particular point. Section 251(c)(2) imposes an interconnection duty at any technically feasible point; it does not limit that duty to a specific method of interconnection or access to unbundled elements.

550. Physical and virtual collocation are the only methods of interconnection or access specifically addressed in section 251. Under section 251(c)(6), incumbent LECs are under a duty to provide physical collocation of equipment necessary for interconnection unless the LEC can demonstrate that physical collocation is not practical for technical reasons or because of space limitations. In that event, the incumbent LEC is still obligated to provide virtual collocation of interconnection equipment. Under section 251, the only limitation on an incumbent LEC's duty to provide interconnection or access to unbundled elements at any technically feasible point is addressed in section 251(c)(6) regarding physical collocation. Unless a LEC can establish that the specific technical or space limitations in subsection (c)(6) are met with respect to physical collocation, we conclude that incumbent LECs must provide for any technically feasible method of interconnection or access requested by a competing carrier, including physical collocation.[1340] If, for example, we interpreted section 251(c)(6) to limit the means of interconnection available to requesting carriers to physical and virtual collocation, the requirement in section 251(c)(2) that interconnection be made available "at any technically feasible point" would be narrowed dramatically to mean that interconnection was required only at points where it was technically feasible to collocate equipment. We are not pursuaded that Congress intended to limit interconnection points to locations only where collocation is possible.

551. Section 251(c)(6) provides the Commission with explicit authority to mandate physical collocation as a method of providing interconnection or access to unbundled elements. Such authority was previously found lacking by the U.S. Court of Appeals for the D.C. Circuit in *Bell Atlantic v. FCC*,[1341] which was decided prior to enactment of the 1996 Act. While section 251(c)(6) limits an incumbent LEC's duty to provide physical collocation in certain circumstances, we find that it does not limit our authority to require, under sections 251(c)(2) and (c)(3), the provision of virtual collocation. We note that under our *Expanded Interconnection* rules, that were amended subsequent to the Bell Atlantic decision, competitive entrants using physical collocation were required by many incumbent LECs to convert to virtual collocation. If the Commission concluded that subsection (c)(6) places a limitation on our authority to require

---

[1340] Because we require incumbent LECs to offer virtual collocation in addition to physical collocation, we reject the suggestion of ACTA that the cost of converting from virtual to physical collocation be borne by the incumbent LEC. *See* ACTA comments at 16.

[1341] *Bell Atlantic Telephone Companies v. FCC*, 24 F.3d 1441 (D.C. Cir. 1994) (Bell Atlantic v. FCC).